Pathways in education and access to employment

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PATHWAYS IN EDUCATION AND ACCESS TO EMPLOYMENT

THE CASE OF FRENCH VOCATIONAL TERTIARY TRACKS

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INTRODUCTION

This paper aims to compare the pathways in education and the access to employment of young French graduates from the two principal tertiary short vocational tracks: the Advanced Technical Courses (STS[1]) and the Technological University Institutes (IUT). The originality of this comparison lies in its re-examination of these educational pathways in the light of individual trajectories onto the labour market, and the perspectives that emerge. Not only course changes, dropouts or academic failures but also successfully completed studies are viewed here as elements in the increasing complexity of training pathways, based on which career guidance upstream and its effect on the transition options from education to employment downstream will be examined.

The comparison of pathways during and following higher education revolves around three key questions:

- What similarities and differences can be observed between the careers strategies and the academic profiles of students following IUT and STS tracks?

[1] Sections de Techniciens Supérieurs.

- What progress is made by enrolees to these tracks during higher education and what determining factors explain the different structures?

- In what ways do these differentiated educational pathways result in more or less effective access into the labour market?

The answers to these questions are informed by a survey entitled 'Generation 2004', carried out by Céreq (the French centre for research and study of qualifications). The survey interviewed a very large sample representative of the 700,000 young people, leaving all levels of the French education system in 2004, among which 380,000 exited from higher education.

Part One provides a brief historical insight into the development of the STS and IUT tracks, and of their relative roles within the French education system. Parts Two and Three outline the profiles of the young people enrolled in these tracks and establish a typology of their pathways through higher education. The concluding section focuses on their access to the labour market.

I. THE DEVELOPMENT OF SHORT HIGHER EDUCATION TRACKS: A HISTORICAL OVERVIEW

France is among the OECD countries with the highest percentage of students on short vocational training courses (OECD 2008). This is the result of the progressive expansion of higher education vocational training opportunities and the enthusiasm these have generated among young people and their families, in view of the excellent employment prospects they offer. The development of a range of post-secondary vocational qualifications is primarily the result of the creation of Advanced Technical Courses (STS) in high schools or learning centres in 1959, and of the Technological University Institutes (IUT), integrated within French universities in 1966. Despite being introduced during a period of sustained economic growth, shortage of manpower and low unemployment rates, these tracks did not prove immediately attractive to young people.

THE STS AND IUT TRACKS: KEY FACTS

In France, short higher education courses are essentially limited to the STS or IUT tracks. In the international nomenclature, these courses are listed as ISCED 5B. In the academic year 2008-09, there were 234,200 STS students and 144,560 on IUT courses. The track leading to the University Technology Qualification (DUT) at universities is a two-year course and is open to all baccalaureate holders or equivalent. The vocational training provided at such institutions is designed for students seeking technical and professional management positions. The 115 IUTs offering this teaching cover 24 specialities, the majority related to the production sector (materials science and engineering, IT, mechanical and industrial engineering) while the remaining fields of study relate to the service sector (marketing techniques, legal and social careers, logistics, transport, business management etc).

STS courses are taught at high schools and apprentice training centres and prepare students for the Advanced Technician's Certificate (BTS). There are currently 2,182 educational institutions offering a post-baccalaureate option in this STS track, with 88 fields of study in the production and service sectors taught. The BTS enables the acquisition of a vocational qualification leading to employment as a senior technician with management responsibilities as the colleague of an engineer or supervisor.

These two vocational tracks are both selective: entrance requires the passing of an examination and a favourable assessment of the school report file submitted by the candidate. The tuition always includes both pedagogical input and work experience. Originally designed as 'exit' qualifications, the BTS and DUT can nevertheless lead on to higher studies. DUTs can be followed by a general or vocational degree or by a specialised one-year national technology qualification, or indeed by courses at certain engineering schools; BTS holders who pursue further studies generally attend university courses.

The structure of the training courses differs significantly between the two tracks. The range of BTS options is highly fragmented owing to its provision at over 2000 secondary education institutions. Conversely, the range of DUT training options is concentrated in the 115 currently operating IUTs. Nested within the university system, the IUTs are most often founded in densely populated urban areas, making them rather difficult to access for rural populations.

The ensuing economic crisis of the 1980s brought about drastic changes. The fight against mass unemployment, particularly amongst the young, became a permanent public policy concern. Education policy supported this endeavour and sought effective solutions to reduce the gap between training provision and economic imperatives. The vocationalisation of higher education thus became a

key issue of education reform, with the virtues of the initial forms of vocational education represented by the STS and IUT tracks becoming once again. Conscious of labour market difficulties, students turned in increasing numbers towards short higher vocational courses, which seemed to provide greater guarantee of access to employment opportunities.

Beyond these initiatives to promote vocational training on all levels, the 1980s also saw a marked rise in interest in apprenticeship and the easier access to employment it provides. Comparative studies and international OECD assessments highlighted the German dual system as a paradigm of successful vocational education and an effective weapon in the fight against youth unemployment. The French equivalent manifested itself in the design of numerous public schemes to foster employability, with business internships now seen as a training phase in their own right (Romani 2004).

In line with previous developments, the 1990s were marked by a significant increase in numbers pursuing the vocational tracks of short higher education—at the beginning of the new century, one student in six was taking an STS or IUT course. This growth also went hand in hand with a burgeoning mass market within higher education and a rise in the standard of qualifications, increasingly required by economical environment in order to feed technical management positions, themselves under pressure from technological change. The STS track, which was be supplanted by IUT courses, developed strongly in its own right over the course of the decade: nearly 239,000 students enrolled in 2000-01 as against 193,000 in 1990-91. At the same time, however, this quantitative expansion was reflected qualitatively by a proliferation in the number of options on offer. At the beginning of the last decade, over a hundred training courses leading to qualifications covered a wide range of industrial and service sector specialisations.

At the start of the century, short higher vocational education tracks had therefore reached a highpoint, and now entered a period of stagnation. Numbers of higher education students pursuing these tracks remained stable, around 10% for STS and 6% for IUT. This tendency ran counter to the efforts of French public authorities, now facing persistent youth unemployment, among the highest in Europe, which appeared unaffected by the various measures taken. In light of this, the pursuit of vocational training within higher education was reaffirmed as a key objective of education policy, also designed to tackle drop-out rates among students in the first years of university study. The introduction of vocational degrees, as part of the 'LMD' university degree reforms, should be understood in this light.

Despite their excellent performance in terms of access to jobs, the training provided by STS and IUT courses was a focus of public debate. How best to redirect students facing difficulties in their first

year towards these selective tracks? How to open their minds up to higher education and particularly to vocational degrees? The current institutional debate between the government on the one hand and management and unions on the other highlights the need to revisit the link between secondary education and short higher education, and more broadly speaking, to focus the discussion above all on the development of educational pathways: to overhaul BTS specialisations, which are currently mostly unclear in terms of their training provision; and to consider university integration for STS tracks intended as a stepping stone to further studies.

This feedback on 50 years of development of short higher education in France has exposed the 'blind spots' left unattended and highlighted in recent debates on the STS and IUT tracks. These gaps in knowledge involve understanding of the nature of career and vocational guidance for enrolled students, the available pathways and the different educational strategies underlying these two tracks—too frequently treated as similar in the literature, to the detriment of their individual characteristics. New inputs are required in order to better clarify the differences between pathways in terms of the labour market, seen here as a direct extension of training. In this respect, the longitudinal analysis of pathways that emerged from the 'Generation 2004' inquiry provides interesting empirical results, potentially able to clarify the ongoing debates.

II. THE DIFFERENCE IN ACCESS TO STS AND IUT TRACKS MADE BY STUDENTS' EDUCATIONAL BACKGROUND

Several ways forward exist for young baccalaureate holders on entering higher education. They can enrol, without conditions, in a first year university course or seek admission to more restricted and limited tracks, selection for which is based on their candidate files.

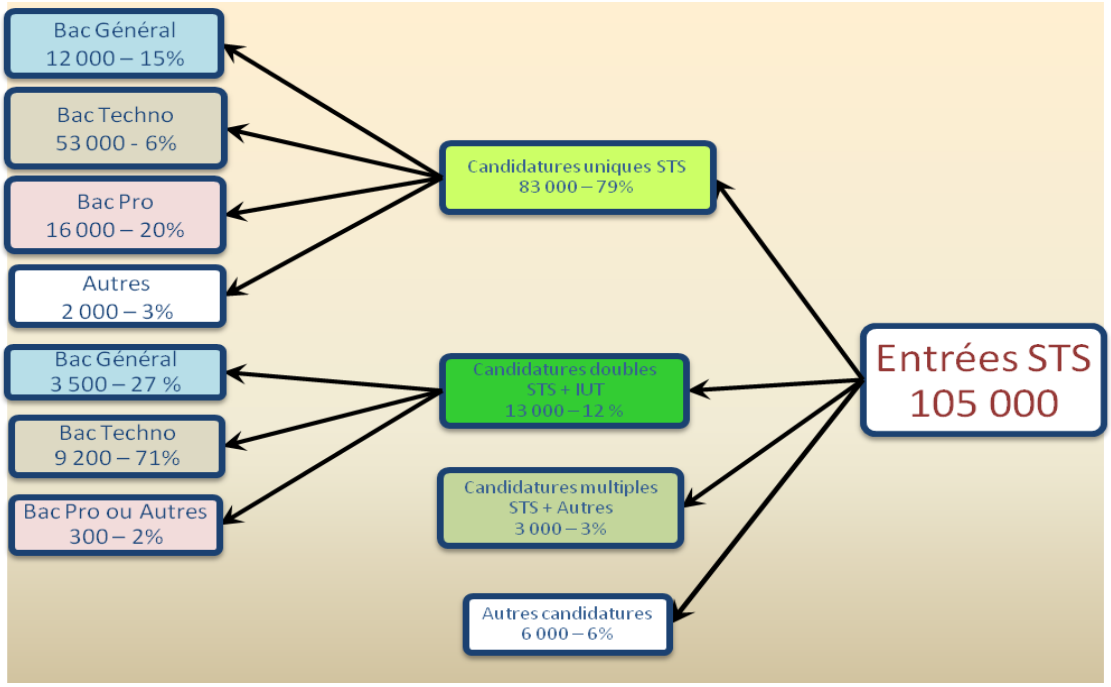
These options include four major training tracks: General degrees, STS, IUT courses and those which prepare students for the *Grandes écoles* and schools of engineering, business, health and social training.

Student decisions to follow one or other of these tracks are determined by their individual career plans and the stages of the career guidance process at the end of secondary education. Such choices are influenced by several factors: their gender and social origins, their educational attainment, the level of maturity of their professional career plans and, for some of them, an early entrance in a vocational stream.

Moreover, candidates' individual strategies appear quite dissimilar.

Three quarters of young people enrolled on STS courses post-baccalaureate had applied only for this course, identified as their 'target' course. Conversely, fewer than half of the young people enrolling on IUT courses had applied only for this track. The majority had applied for two or more selective higher education courses, including these. (cf. figs 1 and 2)

Fig. 1 What is the background of the young people of Generation 2004 enrolling on STS post-baccalaureate?

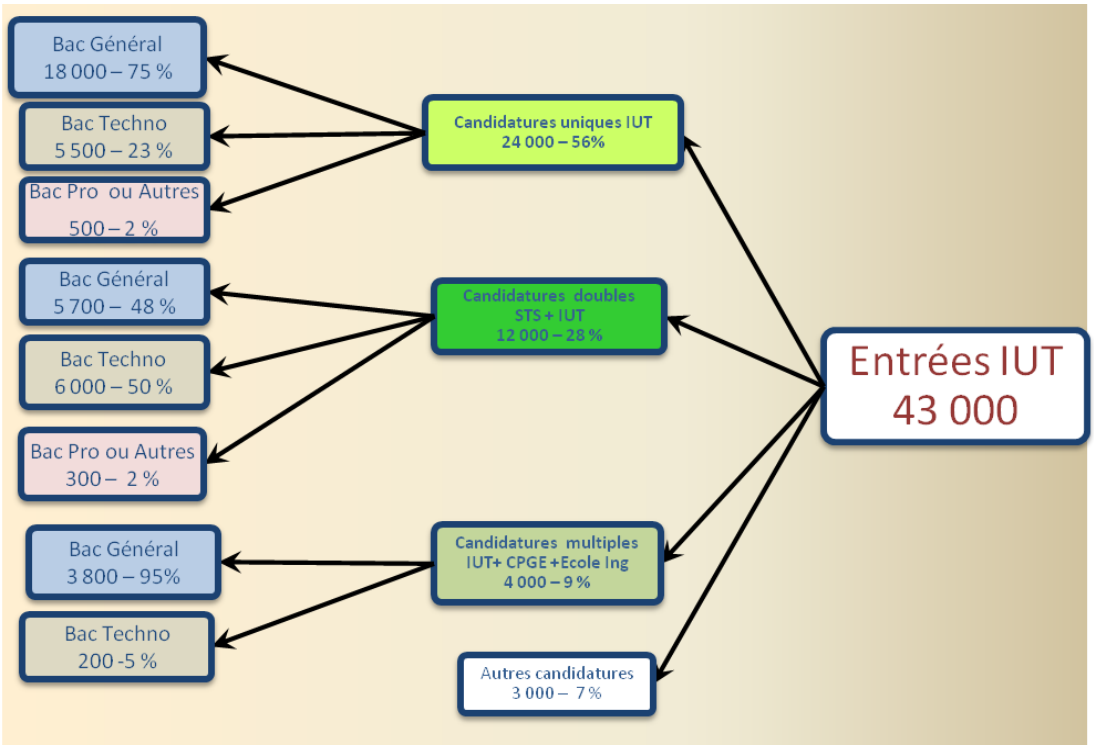


Source: Céreq's 'Generation 2004' survey.

Caption: 150,000 young people leaving the education system in 2004 enrolled in an STS post-baccalaureate. Of these, 83,000 had applied only for this training track, of whom 12,000 had a general baccalaureate, 53,000 a technical baccalaureate and 16,000 a vocational baccalaureate.

Français	English
Bac Général	General baccalaureate
Bac Techno	Technical baccalaureate
Bac Pro	Vocational baccalaureate
Autres	Others
Bac Pro ou Autres	Vocational baccalaureate or others
Candidatures uniques STS	STS-only candidates
Candidatures doubles STS + IUT	Dual STS and IUT candidates
Candidatures multiples STS + Autres	Multiple applications for STS and other courses
Autres candidatures	Other applications
Entrées STS	STS enrolments

Fig. 2: What is the background of the young people of Generation 2004 enrolling on IUT courses post baccalaureate?



Source: Céreq's 'Generation 2004' survey.

Caption: 43,000 young people leaving the education system in 2004 enrolled on IUT courses post-baccalaureate. Of these, 24,000 had applied only for this training track, of whom 18,000 had a general baccalaureate, 5,500 a technical baccalaureate and 500, a vocational baccalaureate.

Français	English
Bac Général	General baccalaureate
Bac Techno	Technical baccalaureate
Bac Pro	Vocational baccalaureate
Autres	Others
Bac Pro ou Autres	Vocational baccalaureate or others
Candidatures uniques IUT	IUT-only candidates
Candidatures doubles STS + IUT	Dual STS and IUT candidates
Candidatures multiples IUT + CPGE + Ecole Ing	Multiple applications for IUT + *Grandes écoles* + Engineering School
Autres candidatures	Other applications
Entrées IUT	IUT enrolments

The students enrolling for STS were those whose educational background had been least promising before entering higher education and in this were markedly different from their counterparts: nearly 9% of them entered junior high school late, i.e. 4 percentage points higher than new enrolees on IUT or degree courses. 24% had left the generalist pathway in secondary school (as against 5% for IUT or degree students), whether through choice (the majority) or imposition (one out of every five).

This early entrance in a vocational stream had consequences for the type of baccalaureate young people entering higher education were able to obtain. While vocational baccalaureate holders are the exception in all higher education tracks, they represent 16% of enrolments on STS courses, equal to

general baccalaureate holders. Technical baccalaureate holders meanwhile make up the vast majority of STS enrolees (64%). Although to a lesser extent than for degrees or the *Grandes écoles*, enrolment on IUT courses is more generalist, since two thirds of new enrolees have a general baccalaureate, while the remaining third are mostly from the technical track.

The proportion of baccalaureate holders who have gained a mention is higher in the preparatory classes for the *Grandes écoles* and other higher education tracks (52%) and is weakest in the degree sector (27%). Whatever the nature of the baccalaureate, the proportion of mention enrolees is still higher on IUT than on STS courses. It should also be noted that for both IUT and STS, there are more mention enrolees among the vocational than among the technical baccalaureate holders, and more among the technical cohort than among the general cohort. This reflects the degree of difficulty of the respective baccalaureates, with the mention system likely to raise doubts as to the ability of young people who have pursued vocational courses at secondary level to pursue higher education.

These findings are summarised by two logistical regressions modelling the probability, for higher education leavers, of having chosen one or other of three major tracks of higher education after the baccalaureate, rather than an STS. Model 1a (*cf* table below) takes into account only three explanatory variables (gender, type of residence in the final year and whether or not the subject had a vocational career plan at the moment of choosing). Model 1b introduces further variables linked to academic performance (careers guidance received at the end of the first secondary cycle, the type of baccalaureate and whether or not the subject has gained their baccalaureate with mention). The introduction of these variables exercises only a marginal effect on the results obtained from the previous model: the effects of gender, local context and career plans are not absorbed by the effect of academic success indicators.

If we consider the training choices of young people engaging in one of the four higher education tracks after the baccalaureate, the results as presented in the models below lead to a number of conclusions.

The most important of these is that choice of baccalaureate proves a major determining factor in choice of track. Holders of a technical baccalaureate are twenty times more likely than general baccalaureate holders to opt for an STS rather than a degree, and ten times more likely to opt for this track over an IUT. For their part, still compared with general baccalaureate holders, vocational baccalaureate holders are twenty times more likely to opt for an STS than a degree, and twenty five times more than for an IUT. The educational hierarchy is reconfirmed by these findings: holders of a

general baccalaureate tend to extend their studies within the 'noble and acknowledged' tracks of higher education, whether general or vocational. Conversely, holders of a vocational baccalaureate, positioned at the bottom of the school performance scale, find their range of options is more likely to be restricted to the STS track, sometimes regarded as 'higher education lite' (Orange, 2009 op.cit).

Other factors influence the decision to opt for an STS or an IUT. Male students have a greater propensity than female students to choose a course at an IUT than an STS, whereas young women opt more readily for the general higher education track.

Having a vocational career plan increases one's chances of opting for an STS over an IUT. But those who already have precise ideas of their future career are also more likely to have chosen another training path (future doctors or engineers).

Moreover, the fact of having experienced unsatisfactory careers guidance seems to impact on future choices, particularly in terms of vocational training. In this regard, it should be noted that having careers guidance at secondary level is more likely to direct the young person towards an STS than all other tracks. From this point of view, there is little discrepancy between an IUT and a degree. However, the imposition of career choices is more likely to affect those who have enrolled in degree courses or courses other than the STS, which in this respect are no different from IUT courses.

The local environment also impacts on the choice of higher education track: more young people living in rural or under-urbanised areas opt for STS over general training or even IUT courses. The proximity of the educational institution is known to be an important determining factor in choice (Grelet, 2008), which is also linked to economic aspects and to the capacity of families to move for educational purposes.

MODELS 1A AND 1B

THE PROBABILITY OF OPTING TO ENROLL IN ONE OF THE 4 MAJOR HIGHER EDUCATION TRACKS POST-BACCALAUREATE.

Reference 'STS-Enrolment' (N=4360)[2]	Enrolment in IUT (vs. STS) (N=2033)		Enrolment in Degree Course (vs.STS) (N=6815)		Enrolment in preparatory class for Grandes écoles, professional schools or other.	
	Model 1a	Model 1b	Model 1a	Model 1b	Model 1a	Model 1b
Variables						
Gender (ref=femme)						
Male	1.2***	1.4***	0.5***	0.6***	0.6***	0.7***
Had a professional career plan in final year? (ref.= no idea)						
Idea of field	0.9*	n.s.	0.7***	0.7***	0.7***	0.8***
Idea of specific career	0.5***	0.7***	0.7***	n.s.	1.1*	1.6***
Residence during final year (ref.=urban centre)						
Rural	0.8**	0.9*	0.6***	0.6***	0.6***	0.6***
Intermediate	0.8***	0.8***	0.6***	0.6***	0.6***	0.6***
Other (abroad…)	n.s.	n.s.	1.7***	n.s.	3.4***	1.5***
Careers advice after 3rd grade (ref=2 of general or technical)						
Career path chosen		0.5***		0.6***		0.8*
Imposed career choice		n.s.		1.7***		1.9***
Type of baccalaureate (ref.=general)						
Technical		0.1***		0.05***		0.05***
Vocational		0.04***		0.05***		0.02***
Other baccalaureate level vocational diploma		0.04***		0.08***		0.2***
Baccalaureate with mention (ref.= with mention)						
No mention		0.9**		1.3***		0.4***

Source: Céreq's 'Generation 2004' survey, restricted to higher education leavers.

Caption: the probability of having enrolled in IUT, Degree, Preparatory Class for *Grandes écoles* or other tracks rather than in STS (the reference) is modelled. The results of the model are expressed in odds-ratios. Significance thresholds: ***significant to 1%; ** significant to 5%; * significant to 10%; NS = insignificant.

Explanation of Model 1a: All other things being equal, male students are 1.2 times more likely (half as unlikely) as female students to opt for an IUT (or degree) after the final year, rather than for an STS.

This first overview of education pathways raises a certain number of questions. What specific factors in terms of student profiles determine the choice of training pathways? What about dropouts, which remain high particularly in STS, despite the selection criteria for access to these tracks, and what of changes of course during the study period?

[2] Standard weighting is used in the models (with 1 as average), reproducing the core numbers of the surveyed sample. The numbers given here are the result of this weighting.

III. FOUR MAJOR TYPES OF COURSE IN HIGHER EDUCATION

Enrolling on an STS or an IUT post-baccalaureate is merely the first step of a higher education journey which may well come to a premature end if the student drops out, finish with the acquisition of an end of cycle qualification followed by an exit at ISCED level 5B, experience twists and turns through a change of vocational course, or indeed be extended until a degree-level qualification or higher is gained.

These major categories of higher education courses are once again unevenly represented across the two tracks. Dropouts are twice as common from STS as from IUT courses. Moreover, while the vast majority of STS holders finish studying after obtaining their qualification, this applies only to a third of IUT enrolees. Changes of course resulting in the acquisition of another higher education qualification are rare at STS level, but apply to one IUT student in ten.

TYPES OF COURSE	Definitions	Enrolled in STS.	Enrolled in DUT
DROPOUTS	Young post-baccalaureate students enrolled in STS or IUT courses, exiting the course without obtaining their BTS or DUT, having possibly changed course mid-way through, but unsuccessfully so.	**22%**	**12%**
EXIT WITH QUALIFICATION	Young post-baccalaureate students enrolled in STS or IUT, who have exited with an end-of-cycle BTS or DUT qualification, without pursuing their studies the following year.	**61%**	**36%**
CHANGING COURSES	Young post-baccalaureate students enrolled in STS or IUT, who have not obtained their end-of-cycle qualification but have changed subjects and obtained a higher-level qualification.	**3%**	**10%**
PURSUIT OF FURTHER QUALIFICATIONS	Young post-baccalaureate students enrolled in STS or IUT, having obtained an end-of-cycle (BTS or DUT) qualification and having pursued their studies and obtained one or more further qualifications.	**14%**	**42%**

Source: Céreq's 'Generation 2004' survey, restricted to higher education leavers.

Dropping out or direct exit towards a job for STS students…

In 'Generation 2004', dropping out affects 22% of post-baccalaureate students enrolled for STS and 12% on IUT courses. The frequency of STS dropouts raises questions about the appropriateness, for students whose academic past has not always been glowing, of opting for these tracks. The level of dropouts is of less concern in the case of IUT.

In both cases, albeit to a lesser extent for IUT, dropouts are predominantly male; the phenomenon affecting students from modest backgrounds, those who left primary education late, those who opted

for the vocational track in secondary, those with technical and vocational baccalaureates, and those who enrolled in a given track without having obtained a mention in their baccalaureate. Furthermore, their applications had themselves often been of modest quality: STS only for dropouts from this track; STS and IUT for dropouts from IUT courses.

Among the reasons for abandoning courses, STS dropouts most frequently cite weariness, unlike their IUT counterparts, who more often drop out after failing to be accepted for a higher course.

In 'Generation 2004', those who did not drop out but completed their course then passed directly into employment represent 61% of those who enrolled in STS post-baccalaureate and 36% of those enrolled in IUT courses.

Albeit in lesser proportions than the dropouts, many of the 'direct' BTS leavers had opted for the vocational track in secondary school. By contrast, this was true of only a third of direct DUT leavers. In both cases, they most often came from technical paths, from rural backgrounds, and already had a developed career plan on leaving secondary school. These students had, since secondary school, committed themselves to a linear career path, with the BTS as their goal.

…Pursuing a qualification or professional change of direction for DUTs.

The option of pursuing studies after the BTS or DUT qualifications concerned 14% of STS enrolees and 42% of IUT enrolees. Engaging in further study less frequently than their post-DUT counterparts, post-BTS students also pursued shorter courses. Half stopped at degree level. Further studies were much more common post-DUT as only 27% of the 'continuers' stopped at degree level, with 25% continuing to Masters level. In both cases, those who pursued further qualifications were mostly male and mostly students with successful academic backgrounds, more often with better results in general subjects.

These young people could change courses having started preparing for a BTS or a DUT, towards another ISCED 5B qualification or higher. Such action concerned 3% of STS enrolees and 10% of IUT enrolees. The numbers involved are therefore rather small, i.e. a sample of 120 STS enrolees and 180 from IUT courses, which makes more extensive comment difficult. It should be pointed out that half of the IUT students who changed courses without abandoning their studies altogether continued

to degree level and quite frequently even beyond that. Almost as many changed courses to a BTS, a means of 'catching up' often preferred over other options for those with a baccalaureate and two further years of study. Two models therefore determine such changes: one is 'downwardly-mobile', usually resulting from difficulties in keeping up with the pace at an IUT; the other no doubt because of disappointment with the track, leading to the choice of a more ambitious course.

What impact do these different courses have on their future employability trajectories? What differences can be observed between STS and IUT in terms of the arrival of young graduates on the labour markets in the years following their studies?

IV. THE IMPACT OF THE TRAINING COURSES ON ACCESS TO EMPLOYMENT

A number of studies emphasise the quality of integration into the labour market following these short vocational higher education courses, demonstrating the advantages acquired by graduates from these tracks compared with their counterparts from general courses (Timotéo, 2005).

Do these courses lead more rapidly to stable, better paid and more professionally satisfying jobs overall? (Giret, Moullet, Thomas, 2003). And does this statement apply equally to STS and IUT courses? Does the ensuing occupational integration reflect the professionalisation acquired during STS and IUT studies in similar ways? Or is it rather a reflection of the difference in the way the two tracks are structured?

The distinction in terms of the previously identified training paths offers real added value in achieving a better grasp of these employability issues. As a general rule, opportunities in the labour market are recorded relative to the level of final qualification on leaving the school system. In doing so, the emphasis is on the efficiency of the final qualification in accessing work, while the variety of training pathways leading up to that point is often overlooked.

TABLE 2 ACCESS TO AND QUALITY OF EMPLOYMENT FOR BTS AND DUT HOLDERS, DEPENDING ON EXIT QUALIFICATION

Situation 3 years after finishing school	BTS Exit without qualification	BTS Exit with qualification	BTS and pursuit of studies at the level of…		DUT Exit without qualifi-cation	DUT Exit with qualifi-cation	DUT and pursuit of studies at the level of…	
			Degreee	Masters, Doctorate, Profess-ional Schools			Degree	Masters, Doctorate, Profess-ional Schools
Employment rates in 2007	88	93	95	90	85	92	95	96
For those in work								
% open-ended contract	56	67	79	78	52	74	74	85
% Management	2	5	13	52	6	13	14	67
% Intermediary professions	34	51	63	38	494	52	6	25
% Employees	33	26	15	8	29	23	12	5
% Workers	28	16	6	2	18	10	4	1
% Full time	82	86	91	94	89	88	94	97
Median salary (for those in full-time work)	1300	1350	1500	1840	1210	1460	1570	1950

Source: Céreq's 'Generation 2004' survey

Job seeking after dropping out: job insecurity and resumption of 'remedial' studies.

Course selection of training candidates is not a universal guarantee of success. In 'Generation 2004', more than one in ten IUT post-baccalaureate enrolees left training with no tertiary qualification and joined the labour market. This figure doubled for those on STS courses.

The characteristics of young people experiencing such failure and the great propensity of STS students to abandon their courses have been outlined above. The unemployment rates facing these young people three years after exiting the education system confirm the difficulties they have to cope with: 15% for non-qualified IUT students, 12% for STS. These percentages are twice as high as those for qualified holders.

While the situation of those graduating from STS courses seems better in terms of employment, dropouts generally all face an insecure job situation. For those in employment, barely more than half have an open-ended contract, after three years on the labour market: 56% for non-qualified STS students as against 52% for non-qualified IUT students. Even when employed, nearly two out of every ten non-qualified STS students have only a part-time contract; the same applies to one non-qualified IUT student in ten.

This difficult occupational integration situation is also reflected in the relatively low salary levels—the median net monthly wage of those leaving both tracks is thus in the region of €1,200.

57% of non-qualified STS students are dissatisfied with their job, even if a majority feel they are employed at their skill level. Over a third state that their professional situation is unsatisfactory and 46% aim to find or maintain a stable job. This is further confirmation of the insecurity of the situation facing these young people, whose primary aim is to find stable work, the content of such work being a secondary issue.

Entering the labour market with a qualification: more jobs for BTS holders, and better-quality jobs for DUT holders…

While half the young people surveyed in Generation 2004 who enrolled in IUT or STS courses post-baccalaureate chose to enter the labour market on gaining their qualification, major discrepancies can be observed between the two tracks—most BTS holders conclude their studies at ISCED 5B level as against only 46% of DUT students.

The first years of working life post-graduation are more positive for BTS holders than their DUT counterparts. Three years after leaving the education system, DUT holders are less often employed and more often unemployed than BTS holders. But they enjoy significantly better employment conditions.

In fact, 74% of DUT holders have long-term or civil service jobs. The position of BTS holders is slightly more complex, for while two thirds have stable jobs, one young BTS holder in four has an insecure contract (short-term or interim). This issue of lower quality work is also reflected in the frequency of part-time jobs and the wages on offer (the median being €1,438 for DUT holders and €1,330 for BTS holders)

The positions occupied and overall view of the employment situation also vary somewhat between the two groups of young graduates. While half of them state that they are technicians (51% for BTS and 53% for DUT holders), the distribution of the remainder across the professional hierarchy diverges. Thus nearly 13% of DUT holders are in management positions as against 5% of BTS holders. Conversely, the proportion of salaried workers and employees among BTS holders remains significant: 16% and 26% of posts occupied respectively.

Such professional downgrading is clearly likely to result in dissatisfaction: nearly forty per cent of DUT holders (39%) consider they are working beneath their skill level. This applies to one BTS holder in three. This issue of employment downgrading for BTS and DUT holders is not a new one. The subject of debate in the 1980s, it remains a valid issue, in view of a generalised ‘cascade downgrading’, creating competition between BTS and DUT holders on the one hand and young graduates from the *Grandes écoles* or general university courses on the other.

The latter, no longer sure of being able to access management positions after graduating, position themselves for lower-level jobs.

A profitable professional path for all—pursuing studies leading to qualifications.

Pursuing further studies is the principal option for DUT holders and that of a quarter of BTS holders, but what advantage do they gain from this further investment in training?

If the onset of their working lives are compared, we may observed that those who have attained degree level and higher occupy better positions in the labour market, but this advantage is not identical for BTS and DUT holders.

Extending one's studies does not constitute a substantial advantage in terms of accessing jobs. In fact, the employment rates in 2007 remain high—very similar between straight BTS and DUT holders and those pursuing further studies. Obtaining a vocational degree does nevertheless present considerable advantages: DUT holders who also obtain such a qualification register an employment rate of 98% in 2007 as against 91% of those who have only a DUT.

This differential outcome resulting from pursuing studies is in fact strengthened when training-related variables are factored in. In fact, all other things being equal, BTS holders who pursue further studies, particularly to degree level, have a much stronger chance of finding and keeping work. The fact of having finished their studies with an apprenticeship option plays an even stronger role in their chances of positive integration. For DUT holders, while apprenticeship impacts on the probability of accessing work, its influence is significantly less than that offered by pursuing studies. The chances of being employed after three years of working life are thus three times greater where the DUT holders decided to pursue their studies to degree level and beyond (*cf.* models 2 and 3).

(N=3 113)	*Model 2* Access to work at the beginning of working life for BTS holders		*Model 3* Access to work at the beginning of working life for DUT holders	
	Probability of occupying a job in the 2 months after exiting educztion	Probability of being in work 3 years after exiting educztion	Probability of occupying a job in the 2 months after exiting educztion	Probability of being in work 3 years after exiting educztion
Variables				
Gender (ref=female)				
Male	1.4***	ns	ns	ns
Had a professional career plan in final year? (ref.= no idea)				
Idea of field	ns	2.0***	ns	ns
Idea of specific career	ns	2.3***	ns	ns
Residence during final year (ref.=urban centre)				
Rural	1.3***	ns	1.3*	1.6*
Intermediate	1.3***	1.5***	ns	1.6*
Type of baccalaureate (ref.=general)				
Technical	0.8**	1.3*	ns	ns
Vocational	ns	ns	ns	ns
Mention obtained in baccalaureate (ref=mention obtained)				
No mention	0.9*	0.8**	ns	ns
Apprenticeship ***(ref = Non apprentice)***				
Apprentice	2.4***	2.0***	2.0***	1.7*
Specialism (ref=industrial)				
General	ns	ns	ns	ns
Tertiary	0.9**	0,7**	ns	ns
Exit qualification (ref. BTS/DUT)				
Degree	1.3**	1.6**	2.0***	2.0**
M, D, School	1.4***	ns	1.5***	3.5***

Source: Céreq's 'Generation 2004' survey, restricted to higher education leavers.

Caption: The results of the model are expressed in odds-ratios. Significance thresholds: ***significant to 1%; ** significant to 5%; * significant to 10%; NS = insignificant.

Explanation of model: All other things being equal, male BTS holders have 1.4 times more chance than female BTS holders of being employed 2 months after leaving.

	Model 4 Quality of work after 3 years of working life for BTS holders			*Model 5* Quality of work after 3 years of working life for DUT holders		
	Probability of being on an open-ended contract (n=2 744)	**Probability of having a management-level post (n=2 744)**	**Probability of having a salary higher than the median (1400€)(n=2121)**	**Probability of being on an open-ended contract (n=1174)**	**Probability of having a management-level post (n=1174)**	**Probability of having a salary higher than the median (1400€)(n=1094)**
Variables						
Gender (ref=female)						
Male	1.3**	2.4***	2.8***	1.3*	2.3***	2.8***
Had a professional career plan in final year? (ref.= no idea)						
Idea of field	ns	ns	ns	ns	ns	ns
Idea of specific career	ns	ns	ns	ns	2,1***	ns
Residence during final year (ref.=urban centre)						
Rural	ns	ns	0.7***	ns	ns	0.7**
Intermediate	ns	ns	ns	ns	0.6***	ns
Type of baccalaureate (ref.=general)						
Technical	ns	NS	0.7**	ns	0.6***	0.7**
Vocational	ns	0.6*	0.6***			
Mention obtained in baccalaureate (ref=mention obtained)						
No mention	0.8*	0.8*	ns	0.7*	ns	0.7*
Apprenticeship ***(ref = Non apprentice)***						
Apprentice	1.5**	1.7***	1.9***	1.5*	ns	1.5**
Specialism (ref=industrial)						
General	0.5***	ns	0.4**	ns	0.6**	ns
Tertiary	ns	ns	0.7***	ns		ns
Exit qualification (ref. BTS/DUT)						
Degree	1.8***	3.1***	2.1***	ns	ns	ns
M, D, School	2.0***	22.5***	6.3***	1.8***	18.2***	6.7***

Source: Céreq's 'Generation 2004' survey, restricted to higher education leavers.

Caption: The results of the model are expressed in odds-ratios. Significance thresholds: ***significant to 1%; ** significant to 5%; * significant to 10%; NS = insignificant.

It should be noted that, whatever the original track, the value added is universal when such studies follow the vocational track: 93% of post-BTS and post-DUT students with a vocational degree are in work three years after entering the labour market.

But it is post-DUT students who most benefit from this year of further study. The level of qualification obtained does not impact uniformly on employability indicators, and strategies in pursuing further studies result in some differences between the two tracks. Finishing at degree level seems to benefit BTS graduates most in the long term. In fact, all other things being equal, if obtaining a degree at this level or higher increases the chances of finding work less than two months after leaving, this is not confirmed three years later (cf. model 2). This contrasts with the situation of

DUT graduates for whom pursuing studies has a very favourable impact on rapid access to work and for still being in that work three months after leaving. Their degree makes them twice as likely to obtain such posts as straight DUT holders. Moreover post-DUT students have 3.5 times more chance of being in work three years after leaving if they have decided to continue towards a new degree-level qualification (three years after the baccalaureate) or higher (model 3).

These exits at higher levels also imply better working conditions, especially for post-BTS students. While only two thirds of BTS holders obtained an open-ended contract in 2007, 78% of post-BTS students found themselves in such a situation. The exact same applies to post-DUT students: 82% are in open-ended contracts in 2007 compared to 74% of those who have only the DUT.

From the point of view of remuneration, the salary gain is positive for all (models 4 and 5), whatever the level at which the subject exits. This progression in terms of qualifications is equally reflected in that of social position. While only 13% of DUT holders reach management positions, over 54% do so once they have supplemented their training. This applies equally to 32% of post-BTS students, while only 5% of straight BTS holders are recognised at this level. Similarly, taking a professional degree considerably augments the chances of accessing an intermediary profession. 64% of post-BTS students (as against 51% of BTS holders) and 71% of post-DUT (against 53% of DUT holders)

The chances of accessing a management position are, so to speak, increased by the phenomenon of further studies: leaving at degree level and higher therefore equates to much better chances of obtaining managerial status after three years of working life. Note that the exit level *per se* only implies an advantage for post-DUT students, while degree level confers no particular benefit in terms of the quality of the job situation. This is not the case for post-BTS students, for whom graduating at degree level plays a positive role in their chances of accessing regular work and management positions.

In total, these more positive employment situations go hand in hand with a more favourable assessment of their occupational careers. More young people in this group therefore consider themselves to be employed at their skill level. Only post-DUT students with a general degree express some reservations on the subject. Their dissatisfaction remains a symptom of their less satisfactory situation on the labour market, and possibly in broader terms (Gendron, 1999), that of a deep malaise linked to a rather unoptimistic view of their professional future, viewed realistically but without a great deal of enthusiasm.

Discussion and conclusion

This paper has emphasised the different training and employment pathways of students enroled in short vocational higher education courses. Certain conclusions may be drawn which may elucidate various aspects of the current public debate on the reform of vocational tracks in French higher education.

A comparison of academic backgrounds and pathways into work for STS and IUT students clearly indicates that these two higher education tracks are dissimilar. Each of them refers to different academic audiences, reflects dissimilar judgements and approaches to career decisions and leads to very different courses that bear on future trajectories in finding work.

Certain points of dissimilarity are particularly noteworthy. First, the BTS is more of an exit qualification than the DUT, in the sense that it leads more frequently to a direct entry into the labour market. As such, the BTS continues to fulfil its initial role as a stepping-stone to tertiary qualifications and the acquisition of a professional skill set leading directly to a job.

Moreover, the introduction of 'LMD' university qualification reform in France affects the organisation of higher education tracks two years after the baccalaureate. The search for 'standardisation'—aligning the various strands of three-year higher education provision—calls the future of the STS into question. While STS courses today offer effective training in terms of accessing the labour market, various forms of further education beyond this qualification are developing. The relevance of extending this from two to three years is, however, a matter of debate Will the young people who today opt for a short professional qualification track be ready to commit to a training course extended by a year? Will they and their families be able to avoid the extra cost of deferred entry to the labour market? Will companies adapt their recruitment procedures?

The effectiveness of the STS and IUT courses in terms of employability is confirmed. It remains the case however that this fact can sometimes mask another equally important one, that of the dropout rate of enrolled students. It should be remembered that, according to the Céreq's 'Generation 2004' survey, nearly a quarter of STS students gave up along the way. This early abandonment of higher education studies impacts negatively on their employability, whether in terms of access to or quality of work (table 2).

The question of dropouts must therefore be treated as a matter of urgency, over and above even that of developing further education options. Young people abandoning the STS track should be the special

focus of local or national public initiatives in the fight against dropout rates in higher education. To this end, the principle of locally available training offered under the STS scheme must be maintained so as not to exacerbate inequalities in access to initial training for youth from disadvantaged social and academic backgrounds.

The STS failure rate could be reduced through the institution of specific assistance measures in terms of changing courses, facilitating changes of specialism, which might initially have been imposed or ill-thought through, or indeed by a widening of the range of training options offered to the young, exploring the avenue of work-based learning in particular.

REFERENCES

Abriac D. and Gauron A., Orivel E, Sauvageot C, Stoeffler-Kern F, Chirache S. 2003.
" L'enseignement supérieur court face aux défis socio-économiques " *La Documentation française, Paris.*

Blöss T. and Erlich V. 2000. " Les nouveaux "acteurs" de la sélection universitaire : les bacheliers technologiques en question " *Revue française de sociologie* - p.747-775.

Calmand J and Epiphane D, Hallier P. 2009. " De l'enseignement supérieur à l'emploi : voies rapides et chemins de traverse " *NEF N°43, CEREQ.*.
2008. " premiers pas dans la vie active de la Génération 2004 " *Quand l'école est finie…,CEREQ.*

Durand-Drouhin M. and Romani C. " Les formations en alternance : quel avenir ? " *OCDE, Paris.*

Ertul S. 2000. " L'enseignement professionnel court post-baccalauréat (IUT-STS) " *PUF, Paris.*

Forestier C. 1991. " Les IUT, 25 ans après leur création ". *Savoir éducation formation,* n° 1 p.11-40.

Gendron B. 2004. " Les diplômés d'un BTS et d'un DUT et la poursuite d'études - Une analyse économique " *Publications de la Sorbonne, Paris.*

Giret J.F., Lopez A. et Rose J. 2005. " Des formations pour quels emplois ? " *La Découverte, Paris*.

Giret J-F and Hatot C. 2001. " Mesurer le déclassement à l'embauche : l'exemple des DUT et des BTS ", *Formation Emploi,* n° 75 p.59-73.

Giret J.F. and Grelet Y., Lavialle C, Timoteo J. 2007. " Ruptures et irréversibilités dans les trajectoires, comment sécuriser les parcours professionnels " *RELIEF n°22, CEREQ.*

Grelet Y.2005. " Enseignement professionnel, spécialité de formation et reproduction sociale ". *Éducation et Formation,* n° 72 p.125-136.

Grelet Y., Romani C., Timotéo J. 2010. " Les étudiants des STS et des IUT, comparaison des parcours des conditions d'orientation, des parcours de formation et d'insertion " *Net.doc n°65,* CEREQ. http://www.cereq.fr/pdf/Net-Doc-65.pdf

Jallade J.P. 1991. " L'enseignement supérieur en Europe. Vers une évaluation comparée des Premiers cycles ". Paris : *La Documentation française.*

Joseph O. and Lopez A.. Ryk F. 2008. " Génération 2004 des jeunes pénalisés par la conjoncture ".
Bref n°248 p.1-4, CEREQ.

Kirsch M. and Beernaert Y., Nørgaard S. 2003. “ Tertiary Short Cycle Education in Europe, a comparative study ”. Brussels: *EURASHE*.

Leclercq E., 1996. “ Les trajectoires des techniciens supérieurs : la construction sociale d'une position ”. *Thèse de doctorat*, Strasbourg, Université des sciences humaines Strasbourg II, 477 p.

Lemahie R. 2006. “ Se former. La formation et le devenir des techniciens supérieurs. Le BTS dans l'Europe des études et de l'emploi ” *L'enseignement technique, n° 209* : p.10-12.

Lemaire S. 2004. “ Les bacheliers technologiques dans l’enseignement supérieur ”. *Éducation et formations, n° 67*, p.33-49.
2008. “ Regards sur l’éducation ”. Paris : *OCDE*.

Orange S. 2010.Le choix du BTS : entre construction et encadrement des aspirations des bacheliers d’origine Populaire ”. *Actes de la recherche en sciences sociales, n°183* : p.32-47

Peugny C. 2009. “ Le déclassement ”, Paris : *Éditions Grasset*.

Romani C. 2004. “ Alternance(s), vingt ans de développement en France et à l’étranger ”, NEF n°11, CEREQ.

Sarrazin J. 2010. “ Elements de réflexion sur les formations technologiques supérieures courtes et tout en particulièrement les sections de techniciens supérieurs “. Paris : *La Documentation française*.

Zeman K. and Knighton T., Bussière P. .2004. “ Education and labour market pathways of young Canadians between age 20 and 22 “ an *Overvie.Statistics* Canada.
http://www.arts.yorku.ca/soci/anisef/courses/4630/documents/EducationandlabourmarketpathwaysofyoungCandians.pdf